

SECTION 1: IDENTIFICATIONS OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. Product identifier** **PROTECHGAS**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against:**
Identified uses: Propellant for airsoft guns (ASG)
Uses advised against: Not recommended to use other than indicated above
- 1.3. Details of the MSDS provider:**
Manufacturer Target Michał Szymankiewicz
ul. Radzyńska 68/72/24
03-752 Warsaw, Poland
Ph. +48 609784826
E-mail of the person responsible for the safety data sheet: biuro@chemikos.pl
- 1.4. Emergency phone number (in Poland only) : 112 (general emergency phone) , 998 (fire brigade) , 999 (ambulance service) ; in the other country - local/national emergency phone**

SECTION 2: HAZARD IDENTIFICATION**2.1. Classification of the substance or mixture**Classification of mixture**Flam. Aerosol 1; H222; H229**Physical/chemical hazards:

- Extremely flammable aerosol
- Pressurised container
- May explode if heated
- Vapors create flammable and explosive mixtures with air

Human health hazards

None if used as indicated above

Environmental hazards

The mixture is not classified as hazardous.

2.2. Marking elements:

Product subject to compulsory marking.

Package marking contains:**Pictograms:**

Signal word: Danger

H Relevant risk phrases:

- H222** Extremely flammable aerosol
H229 Pressurized container may burst if heated

P Precautionary statements:

- P210** Keep away from sources of heat, hot surfaces, sparks, open flame or other ignition sources. Do not smoke.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures above 50°C/ 122°F.
P501 Dispose of contents/containers to an approved waste disposal plant

2.3. Other hazards:

None.

The product does not contain substances with properties of PBT or PvB above 0.1%.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Not applicable.

3.2. Mixtures:

Dangerous components:

Content: 90 % - 100% propane

Index No.: 601-004-00-5 CAS No:74-98-6 WE No: 200-827-9

Flam. Gas 1, H220, Press. Gas, H 280

The hazard statements as well as the H phrases referred to in section 3 of this MSDS and their full wording is provided in section 16 hereof. The H phrases refer to the mixture components.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Respiratory exposure:

In case of dizziness or nausea, remove casualty to fresh air, in the absence of rapid improvement, seek medical advice.

If on skin:

After contact with skin, wash immediately with plenty of water. In case of skin irritation, provide medical attention.

If in the eyes:

Flush with plenty of water for 15 minutes, seek medical attention.

Ingestion:

This way of exposure is very unlikely - product in the form of an aerosol. Drink plenty of water, do not induce vomiting, consult a doctor.

4.2. The most important acute and delayed symptoms and effects of exposure:

In high concentrations may cause asphyxiation. Symptoms include loss of mobility / consciousness. The victim might not be aware of being asphyxiated. It may cause narcotic effects in low concentrations. Symptoms may include dizziness, headache, nausea and loss of coordination.

4.3. Indications for any immediate medical attention and special proceeding with the victim:

Decision about the rescue procedure is made by a doctor after thorough evaluation of the victim condition.

SECTION 5: FIRE FIGHTING MEASURES**5.1. Extinguishing media****Suitable extinguishing media:**

Water - water spray, alcohol-resistant foam, carbon dioxide, dry chemical.

Unsuitable extinguishing agents:

Do not use jets of water.

5.2. Special hazards arising from the substance or mixture:

Water may be ineffective as an extinguishing agent. It should be used to cool containers to prevent explosion. Cool tanks exposed to fire or high temperature with water from a safe distance; if possible, remove them from the danger zone (danger of explosion). Carbon oxides (CO, CO₂) can occur as a result of combustion..

5.3. Information for fire-fighters:

Do not allow product to reach sewage system or any water course. Notify the surrounding area, and remove all bystanders not participating in action from the danger zone. Notify the State Fire Brigade, and where necessary, the State Police, the closest local authorities and the nearest Chemical Rescue Unit. Put on gas-tight protective clothing and breathing apparatus (breathing apparatus complete with mask).

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures:**

For non-emergency personnel: notify the appropriate services. Remove all bystanders not participating in action from the danger zone. For emergency responders: Ensure adequate ventilation, use personal protective equipment: gloves and other protective clothing, eye / face protection. Eliminate any ignition sources

6.2. Environmental precautions:

In the event of failure do not allow discharges into the environment.

6.3. Methods and material for containment and cleaning up:

In the event of container damage, remove it from sources of ignition and ensure good ventilation. Keep away

from sources of heat, hot surfaces, sparks, open flame or other ignition sources. Do not smoke. Dispose of contents/container to in accordance with local/regional/ national regulation.

6.4. References to other sections:

Waste management – see section 13 hereof

Personal Protection Equipment – see section 8 hereof

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Use in a well ventilated areas. Avoid sources of ignition, heat, hot surfaces and open flames. Protect against electrostatic discharge, make sure that electric lighting and wiring are in good repair and do not create a potential source of ignition. Do not use cutting tools which cause sparking. Avoid inhaling product vapors. Observe health and safety rules: do not eat, drink and smoke in the workplace, wash hands after use.

7.2. Conditions for safe storage, including any incompatibility:

Store in a well-ventilated and cool place. Keep away from children. Professional use: store in well-ventilated area according to the current regulations for safety and fire protection - fire proof magazine, without heating, explosion-proof electrical and ventilation systems, with electrical conductive flooring; metal devices and store equipment, containers, packaging, etc., which can accumulate electrostatic charges should be grounded. Always store in original containers. Do not use contaminated, empty packaging for other purposes

7.3 Specific end uses:

Look at part 1.2 of MSDS

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Regulation of the Minister of Labour and Social Policy of June 7, 2017 on the maximum acceptable concentrations and intensities of the factors hazardous for environmental at the workplace. (Journal of Laws item 1348)

Ingredients to which exposure limits apply:

	Substance name	CAS No.	NDS mg/m ³	NDSch mg/m ³	NDSP mg/m ³
1.	propane	74-98-6	1800	not	not

Determination in workplace air:

Propane: PN-Z-04252-1:1997

PN-Z-04008-7:2002 Protection of air cleanliness. Sampling. Principles of air sampling in work environment and interpretation of results

PN-EN-689:2002 Workplace atmospheres. Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.

PN-EN-482:2002 Workplace atmospheres. General requirements for procedures for measuring

chemical factors.

8.2. Exposure controls

Suitable technical control measures

Use in well ventilated areas, effective local and general ventilation of the area is required to reduce exposure of the users

Individual measures, such as personal protective equipment:

Eye or face protection:

Avoid contact with eyes; wear protective goggles while handling the product when the risk of exposure occurs

Skin protection

Hand protection

Avoid contact with skin. While in professional use, assuming repeated or prolonged exposure, use hand protection adequate to the work conditions. To this end, use protective gloves resistant to chemicals made from Viton, neoprene, nitrile rubber or PVA (thickness ≥ 0.36 mm, breakthrough time > 480 min.; thickness ≥ 0.65 mm, breakthrough time > 240 min.)

Others:

Wear protective clothing - clean regularly.

Respiratory protection

Avoid inhaling vapors. When the concentration of the substance is determined and known, the choice of personal protection measures should be made taking into account the concentrations of substances occurring at the workplace, time of exposure, the activities performed by the employee and the instructions given by the manufacturer of the personal protective equipment.

Thermal hazards:

Not applicable.

Environmental exposure controls

Do not allow the product to enter and spread in soil, sewerage, groundwater and watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- | | |
|-------------------------------|------------------------------------------|
| a) Appearance: | gas - aerosol, colourless |
| b) Odour: | typical |
| c) Odour threshold: | 9022-36088 mg/m ³ (propane) |
| d) pH: | n/a |
| e) Melting point: | not determined |
| f) Boiling point: | n/a |
| g) Flash point: | not determined |
| h) Evaporation rate: | not determined |
| i) Flammability (solid, gas): | not determined |

- j) Lower /higher explosion limit: not determined
k) Vapor pressure: not determined
l) Relative vapor density: not determined
m) Density: 0,5- 0,6 kg/dm³
n) Solubility in water: insoluble
o) Partition coefficient n-octanol/water: not determined
p) Auto-ignition point: not determined
r). Decomposition temperature: not determined
s) Explosive properties: does not exhibit
t) Oxidising properties: does not exhibit

9.2. Other information

not determined

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data.

10.2. Chemical stability

Stable under appropriate conditions of storage and use.

10.3. Possibility of hazardous reactions:

Not expected.

10.4. Conditions to avoid

High temperature, sources of spark and open fire.

10.5. Incompatible materials:

Oxidising agents.

10.6. Hazardous decomposition products:

Carbon monoxide; look at 5.2 part of MSDS

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

a) acute toxicity:

based on available data the classification criteria are not met

b) corrosive/irritant effect on skin:

based on available data the classification criteria are not met

c) corrosive effect on eyes:

based on available data the classification criteria are not met.

d) sensitising effect on eyes or skin:

based on available data the classification criteria are not met

e) mutagenicity:

based on available data the classification criteria are not met

f) carcinogenicity:

based on available data the classification criteria are not met

g) reproductive toxicity:

based on available data the classification criteria are not met

h) singled dose toxicity

based on available data the classification criteria are not met

i) repeated dose toxicity:

based on available data the classification criteria are not met

SECTION 12: ECOLOGICAL INFORMATION

Environmental hazards:

The mixture is not classified as hazardous. Do not allow the product to enter and spread in soil, sewerage, groundwater and watercourses.

12.1. Toxicity:

No data for mixture.

Propane:

EC₅₀: Toxicity to Daphnia: specie Daphnia Magna 9.3/19mg/l/48h

EC₅₀: Toxicity to algae: 12/13mg/l/72h

12.2. Persistence and degradability:

No data for mixture.

Propane: propane biodegradation can occur in water and soil, but evaporation in the air is most significant. Koc coefficient is 450-460 and shows average mobility of propane in soil. The value $7,07 \times 10^{-4} \text{ mol} / \text{atmm}^3$ of Henry constant implies high propane evaporation rate in aquatic environment, the estimated half-life is 1.9-2.3 day (for a river and lake model respectively). Photochemical dissociation occurs in air and hydroxyl radicals are formed. The half-life is 13 days.

12.3. Bioaccumulation potential:

No data for mixture.

Propane:

values log K_{o/w} 2.36 and log BCF 1.6 and 1.76 prove that bioaccumulation in aquatic environment is negligible

12.4. Mobility in soil:

No data for mixture.

Propane

Koc factor is 450-460 and shows propane average mobility in soil.

12.5. Results of PBT and vPvB assessment:

The product does not contain substances with properties of PBT or PvB above 0.1%

12.6. Other harmful effects:


No data available

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Methods of disposing waste**

The waste and disposable packaging should be disposed of by specialised contractors, and the disposal method should be consulted with the local environmental protection department. Store the residue in original containers. Dispose of according to the applicable regulations.

Empty containers should be disposed of in accordance with applicable regulations or provided to a suitable landfill. Regulation of the Minister of the Environment of 14 December 2012 on waste catalogue (Journal of Laws no.1987).

SECTION 14: TRANSPORT INFORMATION

14.1. UN number (ONZ number)	UN 1950
14.2. Proper UN transport name	
ADR/RID:	AEROSOLS flammable
IMDG:	AEROSOLS
IATA:	Aerosols, flammable
14.3. Transport hazard class(es):	
ADR/RID:	2/5F
IMDG/IATA:	2.1
transport labels	
14.4. Packaging group:	-
14.5. Environmental hazards	None
14.6. Special precautions for user	No data.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	
No data.	

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:**

1. Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006 p.1)
2. Commission Regulation (EU) No 830/2015 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
3. Act of 25 February 2011 on chemical substances and mixtures (Journal of Laws , 2015, item 1203 as amended)
4. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 35, 31.12.2008 p.1)
5. The act of 14 December 2012, on waste (Journal of Laws 2016, item 1987 as amended)
6. Regulation of the Minister of the Environment of 27 September 2001 on waste catalogue (Journal of Laws 2017, item 519 as amended)
7. Statement of the Minister of the Family, Labour and Social Policy of 7 June 2017 - unified text of the Regulation of the Minister of Labour and Social Policy on the maximum acceptable concentrations and intensities of the factors hazardous for health at the workplace (Journal of Laws 2017, item 1348).
8. Regulation of the Minister of Health of 2 February 2011 (Journal of Laws, 2011, no 33, item 166 as amended)

15.2 Chemical safety assessment:

No chemical safety assessment for the substances contained in the mixture and for the mixture alone.

SECTION 16: OTHER INFORMATION

All the information is based on our current knowledge. This MSDS has been developed based on the data sheet and information received from the manufacturer. The consumers must take into account existing laws and other regulations.

Material Safety Data Sheet is accordanced with Regulation (EC) no 830/2015 of 28 My 2015 as amended

Product classification: based on product form. Propellant for airsoft guns (ASG). Not recommended to use other than indicated above.

Prior to starting work with the product, the employees concerned must undergo mandatory health and safety training, due to the presence of chemical factors in the workplace. Perform, document and familiarise staff with the results of risk assessment in the workplace associated with the presence of chemical agents.

H pharses:

H220 – extremely flammable gas

H222 – extremely flammable aerosol

H229 – pressurized container may burst if heated

H280 – Contains gas under pressure; may explode if heated

Description of abbreviations, acronyms and symbols used:

No CAS - Chemical Abstracts Service

No WE - a unique seven-digit identifier that was assigned to substances for regulatory purposes within the European Union by the European Commission;

EINECS: European Inventory of Existing Commercial Chemical Substances;

ELINCS: European List of Notified Chemical Substances;

NLP: No Longer Polymers

No UN - number of identify hazardous materials

EC₅₀ - half maximal effective concentration

LC₅₀ - lethal concentration

NDS - occupational exposure limit

NDSCh - maximum peak exposure limit

NDSP - ceiling exposure limit

vPvB - very persistent and very bioaccumulative

PBT - persistent, bioaccumulative and toxic

Flam. Gas 1 - Flammable gas category 1

Press. Gas – Pressurised gas

Aerosol 1 – aerosol product